

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-16. (Canceled)

17. (New) An underwater building unit comprising:
an assembly including at least two rows of box boards not being intersected with each other and with both ends open;
each row of box boards having a set of stake-plate body combinations and a set of bind members between adjacent stake-plate body combinations;
a positioning beam located on the top of the box boards to connect two box boards; and
a cross rib provided substantially along a middle section of an outer surface of each of the bind members.

18. (New) The underwater building unit according to claim 17, wherein:
the bind members are positioning stake-plate body combinations that are located above the cross rib of the plate body and have outwardly protruded parts, and the stake-plate body combination and the positioning stake-plate body combination are mounted facing each other in the two rows of box boards respectively;
positioning beam mounting grooves are formed in the middle of the top edge of the plate body of the positioning stake-plate body combination, at least a part of a main girder of the positioning beam being embedded into the positioning beam mounting groove; and
the length of the main girder of the positioning beam is designed to be consistent with the distance between the outer surface of the plate bodies of the two opposite positioning stake-plate body combinations of the two rows of box boards.

19. (New) The underwater building unit according to claim 18, further comprising:

a cross rib provided on the outer surface of the stake-plate body combination, and located at a position being consistent with that of the cross rib on the plate body of the positioning stake-plate body combination, said cross rib being coupled with the outwardly protruded parts of the plate body of the positioning stake-plate body combination.

20. (New) The underwater building unit according to claim 17, wherein:

the stake-plate body combinations are mounted in pairs and facing each other in the two rows of box boards, and each said bind member is a positioning baffle comprised of a plate body and an outward lug protruded outwardly in a direction of its outer surface on an upper edge of the plate body; and

a groove is provided on a lower surface of a positioning plate body at two ends of a positioning beam to be coupled with an upper part of a middle stake of the stake-plate body combination, and a length of a main girder of the positioning beam is consistent with a distance between the outer surfaces of the plate bodies of opposed stake-plate body combinations.

21. (New) The underwater building unit according to claim 20, further comprising a cross rib on the positioning baffle composed of at least one cross rib connecting two vertical ribs at a middle part of the positioning baffle.

22. (New) The underwater building unit according to claim 17, wherein:

a wall formed with a plate body-plate body combination is provided on a top of the assembly;

the plate body-plate body combination includes at least two plate bodies posed at an angle and a connecting plate body between the two plate bodies; and

a space for cast-in-place concrete is defined by upper and the lower end surfaces of the plate body-plate body combination and the plate body.

23. (New) The underwater building unit according to claim 22, further comprising reinforcing bar through holes are formed on the connecting plate body.

24. (New) The underwater building unit according to claim 23, wherein the upper and the lower end surfaces of the connecting plate body are perpendicular to one of the plate bodies.

25. (New) The underwater building unit according to claim 24, wherein: the connecting plate body is integrally formed as a single unit with one of the plate bodies;

a corresponding mounting hole is formed on the other plate body;
pre-buried reinforcing bars are placed inside the hole; and
protruded pre-buried reinforcing bars are provided on the end surface on which the connecting plate body is connected with the plate body.

26. (New) The underwater building unit according to claim 22, further comprising a breakwater provided above the plate body-plate body combination.

27. (New) An installation method of the underwater building unit according to claim 17, comprising:

- a. locating an insert plate positioning frame on a water bottom along a designed direction;
- b. placing the two rows of said stake-plate body combinations to a predetermined depth according to the position mark of the insert plate positioning frame above water surface and setting them in place;
- c. hanging the insert plate positioning frame away;
- d. for each row of said stake-plate body combinations, placing a positioning stake-plate body combination into the preserved gaps between every two adjacent stake-plate body combinations and making an outwardly protruded positioning part locked by the stake-plate body combination and positioned by a cross rib; and
- e. locating the positioning beam in the open groove of the positioning stake-plate body combination.

28. (New) An installation method of the underwater building unit according to claim 17, comprising:

- a. locating an insert plate positioning frame on a water bottom along a designed direction;
- b. placing two rows of said stake-plate body combination to a predetermined depth according to the position mark of the insert plate positioning frame above water surface and setting them in place;
- c. hanging the insert plate positioning frame away;
- d. allowing a positioning beam with a forked ear to buckle on two stake-plate body combinations to make an opening of a positioning beam baffle, the stake of the stake-plate body combinations being locked by each other; and
- e. for each row of stake-plate body combinations, placing the baffle with rib in the space between two adjacent stake-plate body combinations.

29. (New) The installation method of the underwater building unit according to claim 27, wherein, in case the foundation is too soft, when inserting the stake-plate body combination or the positioning stake-plate body combination, positioning the stake into the foundation to a predetermined depth first and filling with grit or crushed stone through the stake hole, lifting the stake to allow the filling material to spread into the space under the tip of the stake, and placing the stake back in.

30. (New) An application method of the underwater building unit according to claim 17, wherein construction of a sea entry comprises:

- a. positioning the assembly into water;
- b. substantially filling the assembly with rubble;
- c. adding rubble to a designed height;
- d. placing a mould plate above the two rows of the assembly; and
- e. casting concrete in-place between mould plates to the designed height.

31. (New) An application method of the underwater building unit according to claim 17, wherein construction of an artificial island comprises:

- a. putting the assembly into water and forming an annular frame;
- b. substantially filling the assembly with rubble;
- c. installing a plate body-plate body combination on top of the assembly;
- d. putting a main reinforcing bar through a reinforcing bar through hole in the plate body-plate body combination and tying up the main reinforcing bars with hoops;
- e. casting concrete in-place in the plate body-plate body combination to preserve space for a breakwater;
- f. installing the breakwater at the preserved space; and
- g. filling the inside of the annular wall formed by the plate body-plate body combinations and the breakwater with dry soil until reaching the height of the wall.

32. (New) An application method of the underwater building unit according to claim 17, wherein the construction of a seawall comprises:

- a. putting the assembly into water along a designed direction;
- b. substantially filling the assembly with rubble;
- c. installing a plate body-plate body combination on the top of the assembly;
- d. putting a main reinforcing bar through a reinforcing bar through hole on the plate body-plate body combination and tying up the main reinforcing bars with hoops;
- e. casting concrete in-place in the plate body-plate body combination and to preserve a space for a breakwater;
- f. installing the breakwater at the preserved space; and
- g. filling an inside of a downstream face of the wall formed by the plate body-plate body combination and the breakwater with dry soil until reaching the height of the wall body.